



2459-1-003 SeqList 09-15-08.txt  
SEQUENCE LISTING

<110> Zhou, Ming-Ming  
Aggarwal, Aneel

<120> Methods of Identifying Modulators of Bromodomains

<130> 2459-1-003

<140> 09510314

<141> 2008-03-19

<150> 09/510,314

<151> 2000-02-22

<160> 44

<170> PatentIn version 3.0

<210> 1

<211> 3014

<212> DNA

<213> Homo sapiens

<400> 1  
ggggccgcgt cgacgcggaa aagaggccgt ggggggcctc ccagcgcgtg gagacaccgt 60  
gagccttgga cgcgcgcgga cgcacacctt gtccgcagtc ccgaggaaac tgtccgcagc 120  
caggggcgcg agcagagctc cgggcaggag aaccaaggga gggcgctgtgc tgtggcggcg 180  
cgggcagcgg cagcggagcc gctagtcccc tccctcctgg gggagcagct gcccccgctg 240  
ccgcgcgcgc caccaccatc agcgcgcggg gcccgccag agcgagccgg gccgagcggc 300  
cgctaggggg agggcggggg cgggggagggg ggtgggcgaa gggggcgggg gggcgctggg 360  
ggaggggtctt gctctccgga ctaccagagc ccgagggaga ccttgccggc ggcggcggcg 420  
cctgacacitc ggcgcctctc gccgtgtctc gggggcgcat gtccgaggtc ggcggggcgc 480  
ggcgcggcgg ctgcggggga caggggccgg gccccggggg ctgcccccgc 540  
agcctgcggc gcttcgcgcc gcgccccccg agggctcccc ctgcgcgcgt gccccggggg 600  
gctcggggcg ctgcgggtcg gcgagcggag tggctgcagc gggcaccggc gaaggaccgg 660  
gaggcgggtg ctgcggccga atcgcgtga agaaagcgca actacgtctc gctccgcggg 720  
ccaagaaact ggagaaaact ggagtgtaact ccgcctgcaa ggcgaggagg tcttgtaaat 780  
gtaattggct gaaaaaacct aaccctctac ccactcccc cagagcgcag ctgcagcaaa 840  
taattgtcag tctaacagaa tcctgtcgga gttgtagcca tgccctagct gctcatgttt 900  
cccacttgga gaatgtgtca gaggaagaaa tgaacagact cctgggaata gtattggatg 960  
tggaatatct tcttaacctg gtccacaagg aagaagatgc agataccaaa caagtttatt 1020  
tctatctatt taagtctctg agaaagtcta ttttcaaaag aggaaaaact gtggttgaag 1080  
gctcttttga aaagaaaacc ccatttgaaa aacctagcat tgaacagggt gtgaataact 1140  
ttgtgcagta caaatattag caccctgcag caaaagaaag gcaaacataa tgtgagttgg 1200  
caaaaatggt gctaaaccgc atcaactatt ggcactctgga ggacccatct caacgaagac 1260  
tgcgatctcc caatgatgat atttctggat acaagagaaa ctacacagaa tggctgtggt 1320  
actgcaacgt gccacagttc tgcgacagtc tacctcgcta cgaaaccaca caggtgtttg 1380  
ggagaacatt gcttcgcctg gctttcaact ttatgaggcg acaactcctg gaacaagcaa 1440  
gacagaaaaa agataaaact gtcttgaaa aacgaactct aatcctcat catttccaa 1500  
aatttctgtc catgctagaa gaagaagat atagtcaaaa ctctcccatc tgggatcagg 1560  
attttctctc agcctcttcc agaaccagcc agctaggcat ccaaacagtt atcaatcac 1620  
ctcctgtggc tgggacaaat tcatacaatt caacctcatc ttcccttgag cagccaaaag 1680  
cagggaagca cagtcctgcc ctcttggaat ctcttggaat tgaggaaac ccaggagaaa 1740  
agaggaaaat gactgattct catgttctcg aggaggccaa gaaaccccca gttatgggg 1800  
atatccgat ggaattaatc aacgaggtta tgtctacct cagggacctc gcagcaatgc 1860  
ttggaccaga gaccaatttt ctctcagcac actcggccag ggaatgggcy ccagaggttg 1920  
aagagcgcag ggggtgtaatt gaatttcacg tgggtggcaa ttctctccac caagaaccaa 1980  
acaagaagt cctgatgtgg ctggttggcc tacagaaagt ttctctccac catctgcgcc 2040  
gaattgccaa agaatacatc acacggctcg tctttgacc gaaacacaaa accttgcctt 2100  
taattaaaga tggccgtgtt attggtggta tctgtttccc tctcaaggat 2160  
tcacagagat tgtctctgtg gctgtaacct caaatgagca agtcaagggc tatggaacac 2220  
acctgatgaa tcttttgaaa gaatatcaca taaagcatga tatcctgaac ttctccacat 2280

## 2459-1-003 SeqList 09-15-08.txt

atgcagatga	atatgcaatt	ggatacttta	agaaacaggg	tttctccaaa	gaaattaaaa	2340
taccataaac	caaatatggt	ggctatatca	aggattatga	aggagccact	ttaatgggat	2400
gtgagctaaa	tccacggatc	ccgtacacag	aattttctgt	catcattaaa	aagcagaagg	2460
agataattaa	aaaactgatt	gaaagaaaaa	aggcacaagt	tcgaaaagtt	taccctggac	2520
tttcatgttt	taaagatgga	gttcgacaga	ttcctataga	aagcattcct	ggaattagag	2580
agacaggctg	gaaacgcagt	ggaaaagaga	aaagtaaaga	gccccagagc	cctgaccagc	2640
tttacagcac	gctcaagagc	atcctccagc	agggtgaagag	ccatcaaaagc	gcttggccct	2700
tcatggaacc	tgtgaagaga	acagaagctc	caggatatta	tgaagtтата	agggttcccc	2760
tggatctgaa	aacctgaggt	gaaacgcctca	agaataggta	ctacgtgtct	aagaaattat	2820
tcatggcaga	cttacagcga	gtctttacca	attgcaaaga	gtacaacgcc	gctgagagtg	2880
aatactacaa	atgtgccaat	atcctggaga	aattcttctt	cagtaaaatt	aaggaaagctg	2940
gattaattga	caagtgattt	tttttcccc	tctgcttctt	agaaactcac	caagcagtg	3000
gcctaaagca	aggt					3014

<210> 2  
 <211> 832  
 <212> PRT  
 <213> Homo sapiens

<400> 2

Met	Ser	Glu	Ala	Gly	Gly	Ala	Gly	Pro	Gly	Gly	Cys	Gly	Ala	Gly	Ala
1				5					10					15	
Gly	Ala	Gly	Ala	Gly	Pro	Gly	Ala	Leu	Pro	Pro	Gln	Pro	Ala	Ala	Leu
			20					25					30		
Pro	Pro	Ala	Pro	Pro	Gln	Gly	Ser	Pro	Cys	Ala	Ala	Ala	Ala	Gly	Gly
		35					40				45				
Ser	Gly	Ala	Cys	Gly	Pro	Ala	Thr	Ala	Val	Ala	Ala	Ala	Gly	Thr	Ala
	50					55					60				
Glu	Gly	Pro	Gly	Gly	Gly	Gly	Ser	Ala	Arg	Ile	Ala	Val	Lys	Lys	Ala
	65					70				75				80	
Gln	Leu	Arg	Ser	Ala	Pro	Arg	Ala	Lys	Lys	Leu	Glu	Lys	Leu	Gly	Val
			85						90					95	
Tyr	Ser	Ala	Cys	Lys	Ala	Glu	Glu	Ser	Cys	Lys	Cys	Asn	Gly	Trp	Lys
			100					105					110		
Asn	Pro	Asn	Pro	Ser	Pro	Thr	Pro	Pro	Arg	Ala	Asp	Leu	Gln	Gln	Ile
		115					120					125			
Ile	Val	Ser	Leu	Thr	Glu	Ser	Cys	Arg	Ser	Cys	Ser	His	Ala	Leu	Ala
	130					135						140			
Ala	His	Val	Ser	His	Leu	Glu	Asn	Val	Ser	Glu	Glu	Glu	Met	Asn	Arg
	145				150					155					
Leu	Leu	Gly	Ile	Val	Leu	Asp	Val	Glu	Tyr	Leu	Phe	Thr	Cys	Val	His
			165						170					175	
Lys	Glu	Glu	Asp	Ala	Asp	Thr	Lys	Gln	Val	Tyr	Phe	Tyr	Leu	Phe	Lys
			180					185					190		
Leu	Leu	Arg	Lys	Ser	Ile	Leu	Gln	Arg	Gly	Lys	Pro	Val	Val	Glu	Gly
		195					200					205			
Ser	Leu	Glu	Lys	Lys	Pro	Pro	Phe	Glu	Lys	Pro	Ser	Ile	Glu	Gln	Gly
	210					215					220				

## 2459-1-003 SeqList 09-15-08.txt

Val Asn Asn Phe Val Gln Tyr Lys Phe Ser His Leu Pro Ala Lys Glu  
 225 230 235  
 Arg Gln Thr Ile Val Glu Leu Ala Lys Met Phe Leu Asn Arg Ile Asn  
 245 250 255  
 Tyr Trp His Leu Glu Ala Pro Ser Gln Arg Arg Leu Arg Ser Pro Asn  
 260 265 270  
 Asp Asp Ile Ser Gly Tyr Lys Glu Asn Tyr Thr Arg Trp Leu Cys Tyr  
 275 280 285  
 Cys Asn Val Pro Gln Phe Cys Asp Ser Leu Pro Arg Tyr Glu Thr Thr  
 290 295 300  
 Gln Val Phe Gly Arg Thr Leu Leu Arg Ser Val Phe Thr Val Met Arg  
 305 310 315  
 Arg Gln Leu Leu Glu Gln Ala Arg Gln Glu Lys Asp Lys Leu Pro Leu  
 325 330 335  
 Glu Lys Arg Thr Leu Ile Leu Thr His Phe Pro Lys Phe Leu Ser Met  
 340 345 350  
 Leu Glu Glu Glu Val Tyr Ser Gln Asn Ser Pro Ile Trp Asp Gln Asp  
 355 360 365  
 Phe Leu Ser Ala Ser Ser Arg Thr Ser Gln Leu Gly Ile Gln Thr Val  
 370 375 380  
 Ile Asn Pro Pro Pro Val Ala Gly Thr Ile Ser Tyr Asn Ser Thr Ser  
 385 390 395 400  
 Ser Ser Leu Glu Gln Pro Asn Ala Gly Ser Ser Ser Pro Ala Cys Lys  
 405 410 415  
 Ala Ser Ser Gly Leu Glu Ala Asn Pro Gly Glu Lys Arg Lys Met Thr  
 420 425 430  
 Asp Ser His Val Leu Glu Glu Ala Lys Lys Pro Arg Val Met Gly Asp  
 435 440 445  
 Ile Pro Met Glu Leu Ile Asn Glu Val Met Ser Thr Ile Thr Asp Pro  
 450 455 460  
 Ala Ala Met Leu Gly Pro Glu Thr Asn Phe Leu Ser Ala His Ser Ala  
 465 470 475 480  
 Arg Asp Glu Ala Ala Arg Leu Glu Glu Arg Arg Gly Val Ile Glu Phe  
 485 490 495  
 His Val Val Gly Asn Ser Leu Asn Gln Lys Pro Asn Lys Lys Ile Leu  
 500 505 510  
 Met Trp Leu Val Gly Leu Gln Asn Val Phe Ser His Gln Leu Pro Arg  
 515 520 525  
 Met Pro Lys Glu Tyr Ile Thr Arg Leu Val Phe Asp Pro Lys His Lys  
 530 535 540  
 Thr Leu Ala Leu Ile Lys Asp Gly Arg Val Ile Gly Gly Ile Cys Phe  
 545 550 555 560

2459-1-003 SeqList 09-15-08.txt

Arg Met Phe Pro Ser Gln Gly Phe Thr Glu Ile Val Phe Cys Ala Val  
565 570  
Thr Ser Asn Glu Gln Val Lys Gly Tyr Gly Thr His Leu Met Asn His  
580 585 590  
Leu Lys Glu Tyr His Ile Lys His Asp Ile Leu Asn Phe Leu Thr Tyr  
595 600 605  
Ala Asp Glu Tyr Ala Ile Gly Tyr Phe Lys Lys Gln Gly Phe Ser Lys  
610 615 620  
Glu Ile Lys Ile Pro Lys Thr Lys Tyr Val Gly Tyr Ile Lys Asp Tyr  
625 630 635 640  
Glu Gly Ala Thr Leu Met Gly Cys Glu Leu Asn Pro Arg Ile Pro Tyr  
645 650 655  
Thr Glu Phe Ser Val Ile Ile Lys Lys Gln Lys Glu Ile Ile Lys Lys  
660 665 670  
Leu Ile Glu Arg Lys Gln Ala Gln Ile Arg Lys Val Tyr Pro Gly Leu  
675 680 685  
Ser Cys Phe Lys Asp Gly Val Arg Gln Ile Pro Ile Glu Ser Ile Pro  
690 695 700  
Gly Ile Arg Glu Thr Gly Trp Lys Pro Ser Gly Lys Glu Lys Ser Lys  
705 710 715 720  
Glu Pro Arg Asp Pro Asp Gln Leu Tyr Ser Thr Leu Lys Ser Ile Leu  
725 730 735  
Gln Gln Val Lys Ser His Gln Ser Ala Trp Pro Phe Met Glu Pro Val  
740 745 750  
Lys Arg Thr Glu Ala Pro Gly Tyr Tyr Glu Val Ile Arg Phe Pro Met  
755 760 765  
Asp Leu Lys Thr Met Ser Glu Arg Leu Lys Asn Arg Tyr Tyr Val Ser  
770 775 780  
Lys Lys Leu Phe Met Ala Asp Leu Gln Arg Val Phe Thr Asn Cys Lys  
785 790 795 800  
Glu Tyr Asn Ala Ala Glu Ser Glu Tyr Tyr Lys Cys Ala Asn Ile Leu  
805 810 815  
Glu Lys Phe Phe Ser Lys Ile Lys Glu Ala Gly Leu Ile Asp Lys  
820 825 830

<210> 3

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic bromodomain peptide

<220>

<221> xaa

<222> (2)..(4)  
 <223> Xaa is a maximum of three amino acids. Each of these can be any amino acid.  
 One may be missing.

<220>  
 <221> Xaa  
 <222> (4)..(11)  
 <223> Xaa is a maximum of eight amino acids. Each of these can be any amino acid.  
 One, two, or three may be missing.

<220>  
 <221> Xaa  
 <222> (5)..(5)  
 <223> Xaa is a single amino acid that is either Pro, Lys, or His.

<220>  
 <221> Xaa  
 <222> (6)..(6)  
 <223> Xaa is any single amino acid.

<220>  
 <221> Xaa  
 <222> (8)..(8)  
 <223> Xaa is a single amino acid that can be either Tyr, Phe, or His.

<220>  
 <221> Xaa  
 <222> (9)..(13)  
 <223> Xaa is 5 amino acids. Each of these can be any amino acid.

<220>  
 <221> Xaa  
 <222> (11)..(11)  
 <223> Xaa is a single amino acid that can be either Met, Ile, or Val.

<400> 3

Phe Xaa Pro Xaa Xaa Xaa Tyr Xaa Xaa Xaa Xaa Xaa Xaa Pro Xaa Asp  
 1 5 10 15

<210> 4  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence  
 <220>  
 <223> synthetic bromodomain peptide

<220>  
 <221> Xaa  
 <222> (6)..(6)  
 <223> Xaa represents an acetyl-lysine

<400> 4

Ile Ser Tyr Gly Arg Xaa Lys Arg Arg Gln Arg Arg  
 Page 5

1 5 10  
 <210> 5  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence  
 <220>  
 <223> synthetic bromodomain peptide  
 <220>  
 <221> Xaa  
 <222> (8)..(8)  
 <223> Xaa represents an acetyl lysine.  
 <400> 5  
 Ala Arg Lys Ser Thr Gly Gly Xaa Ala Pro Arg Lys Gln Leu  
 1 5 10

<210> 6  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence  
 <220>  
 <223> synthetic bromodomain peptide  
 <220>  
 <221> Xaa  
 <222> (8)..(8)  
 <223> Xaa represents an acetyl lysine.  
 <400> 6  
 Gln Ser Thr Ser Arg His Lys Xaa Leu Met Phe Lys Thr Glu  
 1 5 10

<210> 7  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens, bromodomain peptide  
 <400> 7  
 Ser Lys Glu Pro Arg Asp Pro Asp Gln Leu Tyr Ser Thr Leu Lys Ser  
 1 5 10 15  
 Ile Leu Gln Gln Val Lys Ser His Gln Ser Ala Trp Pro Phe Met Glu  
 20 25 30  
 Pro Val Lys Arg Thr Glu Ala Pro Gly Tyr Tyr Glu Val Ile Arg Ser  
 35 40 45  
 Pro Met Asp Leu Lys Thr Met Ser Glu Arg Leu Lys Asn Arg Tyr Tyr  
 50 55 60  
 Val Ser Lys Lys Leu Phe Met Ala Asp Leu Gln Arg Val Phe Thr Asn  
 65 70 75 80  
 Page 6

2459-1-003 SeqList 09-15-08.txt

Cys Lys Glu Tyr Asn Ala Pro Glu Ser Glu Tyr Tyr Lys Cys Ala Asn  
85 90 95

Ile Leu Glu Lys Phe Phe Phe Ser Lys Ile Lys Glu Ala Gly  
100 105 110

<210> 8  
<211> 110  
<212> PRT  
<213> Homo sapiens

<400> 8

Gly Lys Glu Leu Lys Asp Pro Asp Gln Leu Tyr Thr Thr Leu Lys Asn  
1 5 10 15

Leu Leu Ala Gln Ile Lys Ser His Pro Ser Ala Trp Pro Phe Met Glu  
20 25 30

Pro Val Lys Lys Ser Glu Ala Pro Asp Tyr Tyr Glu Val Ile Arg Phe  
35 40 45

Pro Ile Asp Leu Lys Thr Met Thr Glu Arg Leu Arg Ser Arg Tyr Tyr  
50 55 60

Val Thr Arg Lys Leu Phe Val Ala Asp Leu Gln Arg Val Ile Ala Asn  
65 70 75 80

Cys Arg Glu Tyr Asn Pro Pro Asp Ser Glu Tyr Cys Arg Cys Ala Ser  
85 90 95

Ala Leu Glu Lys Phe Phe Tyr Phe Lys Leu Lys Glu Gly Gly  
100 105 110

<210> 9  
<211> 109  
<212> PRT  
<213> Tetrahymena thermophila

<400> 9

Leu Lys Lys Ser Lys Glu Arg Ser Phe Asn Leu Gln Cys Ala Asn Val  
1 5 10 15

Ile Glu Asn Met Lys Arg His Lys Gln Ser Trp Pro Phe Leu Asp Pro  
20 25 30

Val Asn Lys Asp Asp Val Pro Asp Tyr Tyr Asp Val Ile Thr Asp Pro  
35 40 45

Ile Asp Ile Lys Ala Ile Glu Lys Lys Leu Gln Asn Asn Gln Tyr Val  
50 55 60

Asp Lys Asp Gln Phe Ile Lys Asp Val Lys Arg Ile Phe Thr Asn Ala  
65 70 75 80

Lys Ile Tyr Asn Gln Pro Asp Thr Ile Tyr Tyr Lys Ala Ala Lys Glu  
85 90 95

Leu Glu Asp Phe Val Glu Pro Tyr Leu Thr Lys Leu Lys

100

<210> 10  
<211> 109  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 10

Ala Gln Arg Pro Lys Arg Gly Pro His Asp Ala Ala Ile Gln Asn Ile  
1 5 10 15  
Leu Thr Glu Leu Gln Asn His Ala Ala Trp Pro Phe Leu Gln Pro  
20 25 30  
Val Asn Lys Glu Glu Val Pro Asp Tyr Tyr Asp Phe Ile Lys Glu Pro  
35 40 45  
Met Asp Leu Ser Thr Met Glu Ile Lys Leu Glu Ser Asn Lys Tyr Gln  
50 55 60  
Lys Met Glu Asp Phe Ile Tyr Asp Ala Arg Leu Val Phe Asn Asn Cys  
65 70 75 80  
Arg Met Tyr Asn Gly Glu Asn Thr Ser Tyr Tyr Lys Tyr Ala Asn Arg  
85 90 95  
Leu Glu Lys Phe Phe Asn Asn Lys Val Lys Glu Ile Pro  
100 105

<210> 11  
<211> 112  
<212> PRT  
<213> *Homo sapiens*

<400> 11

Lys Lys Ile Phe Lys Pro Glu Glu Leu Arg Gln Ala Leu Met Pro Thr  
1 5 10 15  
Leu Glu Ala Leu Tyr Arg Gln Asp Pro Glu Ser Leu Pro Phe Arg Gln  
20 25 30  
Pro Val Asp Pro Gln Leu Leu Gly Ile Pro Asp Tyr Phe Asp Ile Val  
35 40 45  
Lys Ser Pro Met Asp Leu Ser Thr Ile Lys Arg Lys Leu Asp Thr Gly  
50 55 60  
Gln Tyr Gln Glu Pro Trp Gln Tyr Val Asp Asp Ile Trp Leu Met Phe  
65 70 75 80  
Asn Asn Ala Trp Leu Tyr Asn Arg Lys Thr Ser Arg Val Tyr Lys Tyr  
85 90 95  
Cys Ser Lys Leu Ser Glu Val Phe Glu Gln Glu Ile Asp Pro Val Met  
100 105 110

<210> 12  
<211> 112



<212> PRT  
 <213> Homo sapiens

<400> 12

```

Lys Lys Ile Phe Lys Pro Glu Glu Leu Arg Gln Ala Leu Met Pro Thr
1      5      10      15
Leu Glu Ala Leu Tyr Arg Gln Asp Pro Glu Ser Leu Pro Phe Arg Gln
20      25      30
Pro Val Asp Pro Gln Leu Leu Gly Ile Pro Asp Tyr Phe Asp Ile Val
35      40      45
Lys Asn Pro Met Asp Leu Ser Thr Ile Lys Arg Lys Leu Asp Thr Gly
50      55      60
Gln Tyr Gln Glu Pro Trp Gln Tyr Val Asp Asp Val Trp Leu Met Phe
65      70      75      80
Asn Asn Ala Trp Leu Tyr Asn Arg Lys Thr Ser Arg Val Tyr Lys Phe
85      90      95
Cys Ser Lys Leu Ala Glu Val Phe Glu Gln Glu Ile Asp Pro Val Met
100      105      110

```

<210> 13  
 <211> 112  
 <212> PRT  
 <213> Mus musculus

<400> 13

```

Lys Lys Ile Phe Lys Pro Glu Glu Leu Arg Gln Ala Leu Met Pro Thr
1      5      10      15
Leu Glu Ala Leu Tyr Arg Gln Asp Pro Glu Ser Leu Pro Phe Arg Gln
20      25      30
Pro Val Asp Pro Gln Leu Leu Gly Ile Pro Asp Tyr Phe Asp Ile Val
35      40      45
Lys Asn Pro Met Asp Leu Ser Thr Ile Lys Arg Lys Leu Asp Thr Gly
50      55      60
Gln Tyr Gln Glu Pro Trp Gln Tyr Val Asp Asp Val Arg Leu Met Phe
65      70      75      80
Asn Asn Ala Trp Leu Tyr Asn Arg Lys Thr Ser Arg Val Tyr Lys Phe
85      90      95
Cys Ser Lys Leu Ala Glu Val Phe Glu Gln Glu Ile Asp Pro Val Met
100      105      110

```

<210> 14  
 <211> 111  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 14

2459-1-003 SeqList 09-15-08.txt

Asp Thr Val Phe Ser Gln Glu Asp Leu Ile Lys Phe Leu Leu Pro Val  
 1 5 10 15  
 Trp Glu Lys Leu Asp Lys Ser Glu Asp Ala Ala Pro Phe Arg Val Pro  
 20 25 30  
 Val Asp Ala Lys Leu Leu Asn Ile Pro Asp Tyr His Glu Ile Ile Lys  
 35 40 45  
 Arg Pro Met Asp Leu Glu Thr Val His Lys Lys Leu Tyr Ala Gly Gln  
 50 55 60  
 Tyr Gln Asn Ala Gly Gln Phe Cys Asp Asp Ile Trp Leu Met Leu Asp  
 65 70 75 80  
 Asn Ala Trp Leu Tyr Asn Arg Lys Asn Ser Lys Val Tyr Lys Tyr Gly  
 85 90 95  
 Leu Lys Leu Ser Glu Met Phe Val Ser Glu Met Asp Pro Val Met  
 100 105 110

<210> 15  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens  
 <400> 15

Arg Arg Arg Thr Asp Pro Met Val Thr Leu Ser Ser Ile Leu Glu Ser  
 1 5 10 15  
 Ile Ile Asn Asp Met Arg Asp Leu Pro Asn Thr Tyr Pro Phe His Thr  
 20 25 30  
 Pro Val Asn Ala Lys Val Val Lys Asp Tyr Tyr Lys Ile Ile Thr Arg  
 35 40 45  
 Pro Met Asp Leu Gln Thr Leu Arg Glu Asn Val Arg Lys Arg Leu Tyr  
 50 55 60  
 Pro Ser Arg Glu Glu Phe Arg Glu His Leu Glu Leu Ile Val Lys Asn  
 65 70 75 80  
 Ser Ala Thr Tyr Asn Gly Pro Lys His Ser Leu Thr Gln Ile Ser Gln  
 85 90 95  
 Ser Met Leu Asp Leu Cys Asp Glu Lys Leu Lys Glu Lys Glu  
 100 105 110

<210> 16  
 <211> 110  
 <212> PRT  
 <213> Mesocricetus auratus  
 <400> 16

Arg Arg Arg Thr Asp Pro Met Val Thr Leu Ser Ser Ile Leu Glu Ser  
 1 5 10 15  
 Ile Ile Asn Asp Met Arg Asp Leu Pro Asn Thr Tyr Pro Phe His Thr  
 20 25 30

2459-1-003 SeqList 09-15-08.txt

Pro Val Asn Ala Lys Val Val Lys Asp Tyr Tyr Lys Ile Ile Thr Arg  
35 40 45

Pro Met Asp Leu Gln Thr Leu Arg Glu Asn Val Arg Lys Arg Leu Tyr  
50 55 60

Pro Ser Arg Glu Glu Phe Arg Glu His Leu Glu Ile Val Lys Asn  
65 70 75 80

Ser Ala Thr Tyr Asn Gly Pro Lys His Ser Leu Thr Gln Ile Ser Gln  
85 90 95

Ser Met Leu Asp Leu Cys Asp Glu Lys Leu Lys Glu Lys Glu  
100 105 110

<210> 17

<211> 111

<212> PRT

<213> Homo sapiens

<400> 17

Leu Leu Asp Asp Asp Gln Val Ala Phe Ser Phe Ile Leu Asp Asn  
1 5 10 15

Ile Val Thr Gln Lys Met Met Ala Val Pro Asp Ser Trp Pro Phe His  
20 25 30

His Pro Val Asn Lys Lys Phe Val Pro Asp Tyr Tyr Lys Val Ile Val  
35 40 45

Asn Pro Met Asp Leu Glu Thr Ile Arg Lys Asn Ile Ser Lys His Lys  
50 55 60

Tyr Gln Ser Arg Glu Ser Phe Leu Asp Asp Val Asn Leu Ile Leu Ala  
65 70 75 80

Asn Ser Val Lys Tyr Asn Gly Pro Glu Ser Gln Tyr Thr Lys Thr Ala  
85 90 95

Gln Glu Ile Val Asn Val Cys Tyr Gln Thr Leu Thr Glu Tyr Asp  
100 105 110

<210> 18

<211> 111

<212> PRT

<213> Mesocricetus auratus

<400> 18

Leu Leu Asp Asp Asp Gln Val Ala Phe Ser Phe Ile Leu Asp Asn  
1 5 10 15

Ile Val Thr Gln Lys Met Met Ala Val Pro Asp Ser Trp Pro Phe His  
20 25 30

His Pro Val Asn Lys Lys Phe Val Pro Asp Tyr Tyr Lys Val Ile Val  
35 40 45

Ser Pro Met Asp Leu Glu Thr Ile Arg Lys Asn Ile Ser Lys His Lys  
50 55 60

2459-1-003 SeqList 09-15-08.txt

Tyr Gln Ser Arg Glu Ser Phe Leu Asp Asp Val Asn Leu Ile Leu Ala  
65 70 75 80  
Asn Ser Val Lys Tyr Asn Gly Ser Glu Ser Gln Tyr Thr Lys Thr Ala  
85 90 95  
Gln Glu Ile Val Asn Val Cys Tyr Gln Thr Leu Thr Glu Tyr Asp  
100 105 110

<210> 19  
<211> 111  
<212> PRT  
<213> Homo sapiens

<400> 19

Lys Pro Gly Arg Val Thr Asn Gln Leu Gln Tyr Leu His Lys Val Val  
1 5 10 15  
Met Lys Ala Leu Trp Lys His Gln Phe Ala Trp Pro Phe Arg Gln Pro  
20 25 30  
Val Asp Ala Val Lys Leu Gly Leu Pro Asp Tyr His Lys Ile Ile Lys  
35 40 45  
Gln Pro Met Asp Met Gly Thr Ile Lys Arg Arg Leu Glu Asn Asn Tyr  
50 55 60  
Tyr Trp Ala Ala Ser Glu Cys Met Gln Asp Phe Asn Thr Met Phe Thr  
65 70 75 80  
Asn Cys Tyr Ile Tyr Asn Lys Pro Thr Asp Asp Ile Val Leu Met Ala  
85 90 95  
Gln Thr Leu Glu Lys Ile Phe Leu Gln Lys Val Ala Ser Met Pro  
100 105 110

<210> 20  
<211> 111  
<212> PRT  
<213> Homo sapiens

<400> 20

Lys Pro Gly Arg Lys Thr Asn Gln Leu Gln Tyr Met Gln Asn Val Val  
1 5 10 15  
Val Lys Thr Leu Trp Lys His Gln Phe Ala Trp Pro Phe Tyr Gln Pro  
20 25 30  
Val Asp Ala Ile Lys Leu Asn Leu Pro Asp Tyr His Lys Ile Ile Lys  
35 40 45  
Asn Pro Met Asp Met Gly Thr Ile Lys Lys Arg Leu Glu Asn Asn Tyr  
50 55 60  
Tyr Trp Ser Ala Ser Glu Cys Met Gln Asp Phe Asn Thr Met Phe Thr  
65 70 75 80  
Asn Cys Tyr Ile Tyr Asn Lys Pro Thr Asp Asp Ile Val Leu Met Ala

85

90

95

Gln Ala Leu Glu Lys Ile Phe Leu Gln Lys Val Ala Gln Met Pro  
100 105 110

<210> 21  
<211> 111  
<212> PRT  
<213> *Drosophila melanogaster*

<400> 21

Arg Pro Gly Arg Asn Thr Asn Gln Leu Gln Tyr Leu Ile Lys Thr Val  
1 5 10 15  
Met Lys Val Ile Trp Lys His His Phe Ser Trp Pro Phe Gln Gln Pro  
20 25 30  
Val Asp Ala Lys Lys Leu Asn Leu Pro Asp Tyr His Lys Ile Ile Lys  
35 40 45  
Gln Pro Met Asp Met Gly Thr Ile Lys Lys Arg Leu Glu Asn Asn Tyr  
50 55 60  
Tyr Trp Ser Ala Lys Glu Thr Ile Gln Asp Phe Asn Thr Met Phe Asn  
65 70 75 80  
Asn Cys Tyr Val Tyr Asn Lys Pro Gly Glu Asp Val Val Val Met Ala  
85 90 95  
Gln Thr Leu Glu Lys Val Phe Leu Gln Lys Ile Glu Ser Met Pro  
100 105 110

<210> 22  
<211> 109  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 22

Asn Pro Ile Pro Lys His Gln Gln Lys His Ala Leu Leu Ala Ile Lys  
1 5 10 15  
Ala Val Lys Arg Leu Lys Asp Ala Arg Pro Phe Leu Gln Pro Val Asp  
20 25 30  
Pro Val Lys Leu Asp Ile Pro Phe Tyr Phe Asn Tyr Ile Lys Arg Pro  
35 40 45  
Met Asp Leu Ser Thr Ile Glu Arg Lys Leu Asn Val Gly Ala Tyr Glu  
50 55 60  
Val Pro Glu Gln Ile Thr Glu Asp Phe Asn Leu Met Val Asn Asn Ser  
65 70 75 80  
Ile Lys Phe Asn Gly Pro Asn Ala Gly Ile Ser Gln Met Ala Arg Asn  
85 90 95  
Ile Gln Ala Ser Phe Glu Lys His Met Leu Asn Met Pro  
100 105

<210> 23  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

<400> 23

Lys Lys Gly Lys Leu Ser Glu Gln Leu Lys His Cys Asn Gly Ile Leu  
 1 5 10 15  
 Lys Glu Leu Leu Ser Lys Lys His Ala Tyr Ala Trp Pro Phe Tyr  
 20 25 30  
 Lys Pro Val Asp Ala Ser Ala Leu Gly Leu His Asp Tyr His Asp Ile  
 35 40 45  
 Ile Lys His Pro Met Asp Leu Ser Thr Val Lys Arg Lys Met Glu Asn  
 50 55 60  
 Arg Asp Tyr Arg Asp Ala Gln Glu Phe Ala Ala Asp Val Arg Leu Met  
 65 70 75 80  
 Phe Ser Asn Cys Tyr Lys Tyr Asn Pro Pro Asp His Asp Val Val Ala  
 85 90 95  
 Met Ala Arg Lys Leu Gln Asp Val Phe Glu Phe Arg Tyr Ala Lys Met  
 100 105 110

Pro

<210> 24  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

<400> 24

Lys Lys Gly Lys Leu Ser Glu His Leu Arg Tyr Cys Asp Ser Ile Leu  
 1 5 10 15  
 Arg Glu Met Leu Ser Lys Lys His Ala Ala Tyr Ala Trp Pro Phe Tyr  
 20 25 30  
 Lys Pro Val Asp Ala Glu Ala Leu Glu Leu His Asp Tyr His Asp Ile  
 35 40 45  
 Ile Lys His Pro Met Asp Leu Ser Thr Val Lys Arg Lys Met Asp Gly  
 50 55 60  
 Arg Glu Tyr Pro Asp Ala Gln Gly Phe Ala Ala Asp Val Arg Leu Met  
 65 70 75 80  
 Phe Ser Asn Cys Tyr Lys Tyr Asn Pro Pro Asp His Glu Val Val Ala  
 85 90 95  
 Met Ala Arg Lys Leu Gln Asp Val Phe Glu Met Arg Phe Ala Lys Met  
 100 105 110

Pro

2459-1-003 SeqList 09-15-08.txt

<210> 25  
 <211> 113  
 <212> PRT  
 <213> *Drosophila melanogaster*

<400> 25

Asn Lys Glu Lys Leu Ser Asp Ala Leu Lys Ser Cys Asn Glu Ile Leu  
 1 5 10 15  
 Lys Glu Leu Phe Ser Lys Lys His Ser Gly Tyr Ala Trp Pro Phe Tyr  
 20 25 30  
 Lys Pro Val Asp Ala Glu Met Leu Gly Leu His Asp Tyr His Asp Ile  
 35 40 45  
 Ile Lys Lys Pro Met Asp Leu Gly Thr Val Lys Arg Lys Met Asp Asn  
 50 55 60  
 Arg Glu Tyr Lys Ser Ala Pro Glu Phe Ala Ala Asp Val Arg Leu Ile  
 65 70 75 80  
 Phe Thr Asn Cys Tyr Lys Tyr Asn Pro Pro Asp His Asp Val Val Ala  
 85 90 95  
 Met Gly Arg Lys Leu Gln Asp Val Phe Glu Met Arg Tyr Ala Asn Ile  
 100 105 110

Pro

<210> 26  
 <211> 113  
 <212> PRT  
 <213> *Saccharomyces cerevisiae*

<400> 26

Lys Ser Lys Arg Leu Gln Gln Ala Met Lys Phe Cys Gln Ser Val Leu  
 1 5 10 15  
 Lys Glu Leu Met Ala Lys Lys His Ala Ser Tyr Asn Tyr Pro Phe Leu  
 20 25 30  
 Glu Pro Val Asp Pro Val Ser Met Asn Leu Pro Thr Tyr Phe Asp Tyr  
 35 40 45  
 Val Lys Glu Pro Met Asp Leu Gly Thr Ile Ala Lys Lys Leu Asn Asp  
 50 55 60  
 Trp Gln Tyr Gln Thr Met Glu Asp Phe Glu Arg Glu Val Arg Leu Val  
 65 70 75 80  
 Phe Lys Asn Cys Tyr Thr Phe Asn Pro Asp Gly Thr Ile Val Asn Met  
 85 90 95  
 Met Gly His Arg Leu Glu Glu Val Phe Asn Ser Lys Trp Ala Asp Arg  
 100 105 110

Pro

<210> 27  
 <211> 108  
 <212> PRT  
 <213> Homo sapiens

<400> 27

Met Glu Met Gln Leu Thr Pro Phe Leu Ile Leu Leu Arg Lys Thr Leu  
 1 5 10 15  
 Glu Gln Leu Gln Glu Lys Asp Thr Gly Asn Ile Phe Ser Glu Pro Val  
 20 25 30  
 Pro Leu Ser Glu Val Pro Asp Tyr Leu Asp His Ile Lys Lys Pro Met  
 35 40 45  
 Asp Phe Phe Thr Met Lys Gln Asn Leu Glu Ala Tyr Arg Tyr Leu Asn  
 50 55 60  
 Phe Asp Asp Phe Glu Glu Asp Phe Asn Leu Ile Val Ser Asn Cys Leu  
 65 70 75 80  
 Lys Tyr Asn Ala Lys Asp Thr Ile Phe Tyr Arg Ala Ala Val Arg Leu  
 85 90 95  
 Arg Glu Gln Gly Gly Ala Val Val Arg Gln Ala Arg  
 100 105

<210> 28  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

<400> 28

Ser Glu Asp Gln Glu Ala Ile Gln Ala Gln Lys Ile Trp Lys Lys Ala  
 1 5 10 15  
 Ile Met Leu Val Trp Arg Ala Ala Ala Asn His Arg Tyr Ala Asn Val  
 20 25 30  
 Phe Leu Gln Pro Val Thr Asp Asp Ile Ala Pro Gly Tyr His Ser Ile  
 35 40 45  
 Val Gln Arg Pro Met Asp Leu Ser Thr Ile Lys Lys Asn Ile Glu Asn  
 50 55 60  
 Gly Leu Ile Arg Ser Thr Ala Glu Phe Gln Arg Asp Ile Met Leu Met  
 65 70 75 80  
 Phe Gln Asn Ala Val Met Tyr Asn Ser Ser Asp His Asp Val Tyr His  
 85 90 95  
 Met Ala Val Glu Met Gln Arg Asp Val Leu Glu Gln Ile Gln Gln Phe  
 100 105 110  
 Leu

<210> 29  
 <211> 106  
 <212> PRT



&lt;213&gt; Gallus gallus

&lt;400&gt; 29

```

Asn Leu Pro Thr Val Asp Pro Ile Ala Val Cys His Glu Leu Tyr Asn
 1          5          10          15
Thr Ile Arg Asp Tyr Lys Asp Glu Gln Gly Arg Leu Leu Cys Glu Leu
          20          25          30
Phe Ile Arg Ala Pro Lys Arg Arg Asn Gln Pro Asp Tyr Tyr Glu Val
          35          40          45
Val Ser Gln Pro Ile Asp Leu Met Lys Ile Gln Gln Lys Leu Lys Met
 50          55          60
Glu Glu Tyr Asp Asp Val Asn Val Leu Thr Ala Asp Phe Gln Leu Leu
65          70          75          80
Phe Asn Asn Ala Lys Ala Tyr Tyr Lys Pro Asp Ser Pro Glu Tyr Lys
          85          90          95
Ala Ala Cys Lys Leu Trp Glu Leu Tyr Leu
          100          105

```

&lt;210&gt; 30

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Gallus gallus

&lt;400&gt; 30

```

Ser Ser Pro Gly Tyr Leu Lys Glu Ile Leu Glu Gln Leu Leu Glu Ala
 1          5          10          15
Val Ala Val Ala Thr Asn Pro Ser Gly Arg Leu Ile Ser Glu Leu Phe
          20          25          30
Gln Lys Leu Pro Ser Lys Val Gln Tyr Pro Asp Tyr Tyr Ala Ile Ile
          35          40          45
Lys Glu Pro Ile Asp Leu Lys Thr Ile Ala Gln Arg Ile Gln Asn Gly
 50          55          60
Thr Tyr Lys Ser Ile His Ala Met Ala Lys Asp Ile Asp Leu Leu Ala
65          70          75          80
Lys Asn Ala Lys Thr Tyr Asn Glu Pro Gly Ser Gln Val Phe Lys Asp
          85          90          95
Ala Asn Ala Ile Lys Lys Ile Phe Asn Met Lys Lys Ala Glu Ile Glu
          100          105          110

```

&lt;210&gt; 31

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Gallus gallus

&lt;400&gt; 31

2459-1-003 SeqList 09-15-08.txt

Thr Ser Phe Met Asp Thr Ser Asn Pro Leu Tyr Gln Leu Tyr Thr  
 1 5 10 15  
 Val Arg Ser Cys Arg Asn Asn Gln Gly Gln Leu Ile Ser Glu Pro Phe  
 20 25 30  
 Phe Gln Leu Pro Ser Lys Lys Lys Tyr Pro Asp Tyr Tyr Gln Gln Ile  
 35 40 45  
 Lys Thr Pro Ile Ser Leu Gln Gln Ile Arg Ala Lys Leu Lys Asn His  
 50 55 60  
 Glu Tyr Glu Thr Leu Asp Gln Leu Glu Ala Asp Leu Asn Leu Met Phe  
 65 70 75 80  
 Glu Asn Ala Lys Arg Tyr Asn Val Pro Asn Ser Ala Ile Tyr Lys Arg  
 85 90 95  
 Val Leu Lys Met Gln Gln Val Met Gln Ala Lys Lys Lys Glu Leu Ala  
 100 105 110

<210> 32  
 <211> 113  
 <212> PRT  
 <213> Gallus gallus  
 <400> 32

Ser Lys Lys Asn Met Arg Lys Gln Arg Met Lys Ile Leu Tyr Asn Ala  
 1 5 10 15  
 Val Leu Glu Ala Arg Glu Ser Gly Thr Gln Arg Arg Leu Cys Asp Leu  
 20 25 30  
 Phe Met Val Lys Pro Ser Lys Lys Asp Tyr Pro Asp Tyr Tyr Lys Ile  
 35 40 45  
 Ile Leu Glu Pro Met Asp Leu Lys Met Ile Glu His Asn Ile Arg Asn  
 50 55 60  
 Asp Lys Tyr Val Gly Glu Glu Ala Met Ile Asp Asp Met Lys Leu Met  
 65 70 75 80  
 Phe Arg Asn Ala Arg His Tyr Asn Glu Glu Gly Ser Gln Val Tyr Asn  
 85 90 95  
 Asp Ala His Met Leu Glu Lys Ile Leu Lys Glu Lys Arg Lys Glu Leu  
 100 105 110  
 Gly

<210> 33  
 <211> 115  
 <212> PRT  
 <213> Gallus gallus  
 <400> 33

Lys Lys Ser Lys Tyr Met Thr Pro Met Gln Gln Lys Leu Asn Glu Val  
 1 5 10 15

2459-1-003 SeqList 09-15-08.txt

Tyr Glu Ala Val Lys Asn Tyr Thr Asp Lys Arg Gly Arg Arg Leu Ser  
 20 25 30  
 Ala Ile Phe Leu Arg Leu Pro Ser Arg Ser Glu Leu Pro Asp Tyr Tyr  
 35 40 45  
 Ile Thr Ile Lys Lys Pro Val Asp Met Glu Lys Ile Arg Ser His Met  
 50 55 60  
 Met Ala Asn Lys Tyr Gln Asp Ile Asp Ser Met Val Glu Asp Phe Val  
 65 70 75 80  
 Met Met Phe Asn Asn Ala Cys Thr Tyr Asn Glu Pro Glu Ser Leu Ile  
 85 90 95  
 Tyr Lys Asp Ala Leu Val Leu His Lys Val Leu Leu Glu Thr Arg Arg  
 100 105 110  
 Glu Ile Glu  
 115

<210> 34  
 <211> 112  
 <212> PRT  
 <213> Schizosaccharomyces pombe  
 <400> 34

His Asn Ala Pro Phe Asp Lys Thr Lys Phe Asp Glu Val Leu Glu Ala  
 1 5 10 15  
 Leu Val Gly Leu Lys Asp Asn Glu Gly Asn Pro Phe Asp Asp Ile Phe  
 20 25 30  
 Glu Glu Leu Pro Ser Lys Arg Tyr Phe Pro Asp Tyr Tyr Gln Ile Ile  
 35 40 45  
 Gln Lys Pro Ile Cys Tyr Lys Met Met Arg Asn Lys Ala Lys Thr Gly  
 50 55 60  
 Lys Tyr Leu Ser Met Gly Asp Phe Tyr Asp Asp Ile Arg Leu Met Val  
 65 70 75 80  
 Ser Asn Ala Gln Thr Tyr Asn Met Pro Gly Ser Leu Val Tyr Glu Cys  
 85 90 95  
 Ser Val Leu Ile Ala Asn Thr Ala Asn Ser Leu Glu Ser Lys Asp Gly  
 100 105 110

<210> 35  
 <211> 113  
 <212> PRT  
 <213> Schizosaccharomyces pombe  
 <400> 35

Gly Thr Asn Glu Ile Asp Val Pro Lys Val Ile Gln Asn Ile Leu Asp  
 1 5 10 15  
 Ala Leu His Glu Glu Lys Asp Glu Gln Gly Arg Phe Leu Ile Asp Ile  
 20 25 30

2459-1-003 SeqList 09-15-08.txt

Phe Ile Asp Leu Pro Ser Lys Arg Leu Tyr Pro Asp Tyr Tyr Glu Ile  
35 40 45

Ile Lys Ser Pro Met Thr Ile Lys Met Leu Glu Lys Arg Phe Lys Lys  
50 55 60

Gly Glu Tyr Thr Thr Leu Glu Ser Phe Val Lys Asp Leu Asn Gln Met  
65 70 75 80

Phe Ile Asn Ala Lys Thr Tyr Asn Ala Pro Gly Ser Phe Val Tyr Glu  
85 90 95

Asp Ala Glu Lys Leu Ser Gln Leu Ser Ser Ser Leu Ile Ser Ser Phe  
100 105 110

Ser

<210> 36  
<211> 113  
<212> PRT  
<213> Homo sapiens

<400> 36

Gly Thr Asn Glu Ile Asp Val Pro Lys Val Ile Gln Asn Ile Leu Asp  
1 5 10 15

Ala Leu His Glu Glu Lys Asp Glu Gln Gly Arg Phe Leu Ile Asp Ile  
20 25 30

Phe Ile Asp Leu Pro Ser Lys Arg Leu Tyr Pro Asp Tyr Tyr Glu Ile  
35 40 45

Ile Lys Ser Pro Met Thr Ile Lys Met Leu Glu Lys Arg Phe Lys Lys  
50 55 60

Gly Glu Tyr Thr Thr Leu Glu Ser Phe Val Lys Asp Leu Asn Gln Met  
65 70 75 80

Phe Ile Asn Ala Lys Thr Tyr Asn Ala Pro Gly Ser Phe Val Tyr Glu  
85 90 95

Asp Ala Glu Lys Leu Ser Gln Leu Ser Ser Ser Leu Ile Ser Ser Phe  
100 105 110

Ser

<210> 37  
<211> 114  
<212> PRT  
<213> Homo sapiens

<400> 37

Ser Pro Asn Pro Pro Asn Leu Thr Lys Lys Met Lys Lys Ile Val Asp  
1 5 10 15

Ala Val Ile Lys Tyr Lys Asp Ser Ser Gly Arg Gln Leu Ser Glu  
20 25 30

Val Phe Ile Gln Leu Pro Ser Arg Lys Glu Leu Pro Glu Tyr Tyr Glu

35

40

45

Leu Ile Arg Lys Pro Val Asp Phe Lys Lys Ile Lys Glu Arg Ile Arg  
 50 55 60  
 Asn His Lys Tyr Arg Ser Leu Asn Asp Leu Glu Lys Asp Val Met Leu  
 65 70 75  
 Leu Cys Gln Asn Ala Gln Thr Phe Asn Leu Glu Gly Ser Leu Ile Tyr  
 85 90 95  
 Glu Asp Ser Ile Val Leu Gln Ser Val Phe Thr Ser Val Arg Gln Lys  
 100 105 110  
 Ile Glu

<210> 38  
 <211> 113  
 <212> PRT  
 <213> Gallus gallus

&lt;400&gt; 38

Ser Pro Asn Pro Pro Lys Leu Thr Lys Gln Met Asn Ala Ile Ile Asp  
 1 5 10 15  
 Thr Val Ile Asn Tyr Lys Asp Ser Ser Gly Arg Gln Leu Ser Glu Val  
 20 25 30  
 Phe Ile Gln Leu Pro Ser Arg Lys Glu Leu Pro Glu Tyr Tyr Glu Leu  
 35 40 45  
 Ile Arg Lys Pro Val Asp Phe Lys Lys Ile Lys Glu Arg Ile Arg Asn  
 50 55 60  
 His Lys Tyr Arg Ser Leu Gly Asp Leu Glu Lys Asp Val Met Leu Leu  
 65 70 75 80  
 Cys His Asn Ala Gln Thr Phe Asn Leu Glu Gly Ser Gln Ile Tyr Glu  
 85 90 95  
 Asp Ser Ile Val Leu Gln Ser Val Phe Lys Ser Ala Arg Gln Lys Ile  
 100 105 110  
 Ala

<210> 39  
 <211> 114  
 <212> PRT  
 <213> Gallus gallus

&lt;400&gt; 39

Ser Pro Asn Pro Pro Asn Leu Thr Lys Lys Met Lys Lys Ile Val Asp  
 1 5 10 15  
 Ala Val Ile Lys Tyr Lys Asp Ser Ser Ser Gly Arg Gln Leu Ser Glu  
 20 25 30  
 Val Phe Ile Gln Leu Pro Ser Arg Lys Glu Leu Pro Glu Tyr Tyr Glu  
 35 40 45

2459-1-003 SeqList 09-15-08.txt

Leu Ile Arg Lys Pro Val Asp Phe Lys Lys Ile Lys Glu Arg Ile Arg  
 50 55 60  
 Asn His Lys Tyr Arg Ser Leu Asn Asp Leu Glu Lys Asp Val Met Leu  
 65 70 75 80  
 Leu Cys Gln Asn Ala Gln Thr Phe Asn Leu Glu Val Ser Leu Ile Tyr  
 85 90 95  
 Glu Asp Ser Ile Val Leu Gln Ser Val Phe Thr Ser Val Arg Gln Lys  
 100 105 110  
 Ile Glu

<210> 40  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 40

Ala Lys Leu Ser Pro Ala Asn Gln Arg Lys Cys Glu Arg Val Leu Leu  
 1 5 10 15  
 Ala Leu Phe Cys His Glu Pro Cys Arg Pro Leu His Gln Leu Ala Thr  
 20 25 30  
 Asp Ser Thr Phe Ser Leu Asp Gln Pro Gly Gly Thr Leu Asp Leu Thr  
 35 40 45  
 Leu Ile Arg Ala Arg Leu Gln Glu Lys Leu Ser Pro Pro Tyr Ser Ser  
 50 55 60  
 Pro Gln Glu Phe Ala Gln Asp Val Gly Arg Met Phe Lys Gln Phe Asn  
 65 70 75 80  
 Lys Leu Thr Glu Asp Lys Ala Asp Val Gln Ser Ile Ile Gly Leu Gln  
 85 90 95  
 Arg Phe Phe Glu Thr Arg Met Asn Glu  
 100 105

<210> 41  
 <211> 105  
 <212> PRT  
 <213> Mus musculus

<400> 41

Ala Lys Leu Ser Pro Ala Asn Gln Arg Lys Cys Glu Arg Val Leu Leu  
 1 5 10 15  
 Ala Leu Phe Cys His Glu Pro Cys Arg Pro Leu His Gln Leu Ala Thr  
 20 25 30  
 Asp Ser Thr Phe Ser Met Glu Gln Pro Gly Gly Thr Leu Asp Leu Thr  
 35 40 45  
 Leu Ile Arg Ala Arg Leu Gln Glu Lys Leu Ser Pro Pro Tyr Ser Ser  
 50 55 60

2459-1-003 SeqList 09-15-08.txt

Pro Gln Glu Phe Ala Gln Asp Val Gly Arg Met Phe Lys Gln Phe Asn  
65 70 75 80

Lys Leu Thr Glu Asp Lys Ala Asp Val Gln Ser Ile Ile Gly Leu Gln  
85 90 95

Arg Phe Phe Glu Thr Arg Met Asn Asp  
100 105

<210> 42  
<211> 108  
<212> PRT  
<213> Mus musculus

<400> 42

Thr Lys Leu Thr Pro Ile Asp Lys Arg Lys Cys Glu Arg Leu Leu Leu  
1 5 10 15

Phe Leu Tyr Cys His Glu Met Ser Leu Ala Phe Gln Asp Pro Val Pro  
20 25 30

Leu Thr Val Pro Asp Tyr Tyr Lys Ile Ile Lys Asn Pro Met Asp Leu  
35 40 45

Ser Thr Ile Lys Lys Arg Leu Gln Glu Asp Tyr Cys Met Tyr Thr Lys  
50 55 60

Pro Glu Asp Phe Val Ala Asp Phe Arg Leu Ile Phe Gln Asn Cys Ala  
65 70 75 80

Glu Phe Asn Glu Pro Asp Ser Glu Val Ala Asn Ala Gly Ile Lys Leu  
85 90 95

Glu Ser Tyr Phe Glu Glu Leu Leu Lys Asn Leu Tyr  
100 105

<210> 43  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic bromodomain peptide

<220>  
<221> Xaa  
<222> (1)..(1)  
<223> Xaa can be any single amino acid

<220>  
<221> Xaa  
<222> (2)..(2)  
<223> Xaa can be any single amino acid

<220>  
<221> Xaa  
<222> (4)..(6)  
<223> Xaa is a maximum of three amino acids. Each of these can be any amino acid.

One may be missing.

```
<220>
<221> xaa
<222> (6)..(13)
<223> xaa is a maximum of eight amino acids. Each of these can be any amino acid.
One, two, or three may be missing.
```

```
<220>
<221> xaa
<222> (7)..(7)
<223> xaa is a single amino acid that can be Pro, Lys, or His.
```

```
<220>
<221> xaa
<222> (8)..(8)
<223> xaa is a single amino acid that can be any amino acid.
```

```
<220>
<221> xaa
<222> (10)..(10)
<223> xaa is a single amino acid that can be a Tyr, Phe, or His.
```

```
<220>
<221> xaa
<222> (11)..(15)
<223> xaa is five amino acids. Each of these can be any amino acid.
```

```
<220>
<221> xaa
<222> (13)..(13)
<223> xaa is a single amino acid that can be Met, Ile, or Val.
```

<400> 43

```
Xaa Xaa Phe Xaa Pro Xaa Xaa Xaa Tyr Xaa Xaa Xaa Xaa Xaa Xaa Pro Xaa Asp
1          5          10          15
```

```
<210> 44
<211> 20
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> synthetic bromodomain peptide
```

<400> 44

```
Trp Pro Phe Met Glu Pro Val Lys Arg Thr Glu Ala Pro Gly Tyr Tyr
1          5          10          15

Glu Val Ile Arg
                20
```



2459-1-003 SeqList 09-15-08.txt